## Message

From: Hughes, Adam (IHS/PHX) [Adam.Hughes@ihs.gov]

**Sent**: 4/1/2014 7:22:08 PM

To: lpuhuyesva@hopi.nsn.us; bbettenberg@homerlaw.com

CC: Matson, Eric (IHS/PHX) [Eric.Matson@ihs.gov]; Lee, Bessie [Lee.Bessie@epa.gov]; Kerry Brough (kbrough@cox.net)

[kbrough@cox.net]; brad.rea@ihs.gov; Lorenz, Robert (IHS/PHX) [Robert.Lorenz@ihs.gov]

**Subject**: FW: HAMP PV Analysis

Attachments: APS Quote.docx; HAMP Power Alignment APS2.pdf; HAMP Power Alignment APS1.pdf

## All:

Kerry Brough has completed a first draft of the net present value analysis for the HAMP. Kerry's rough numbers are that the net present value of the HAMP with grid power is about \$18M, compared to \$24M for the HAMP with generator power, and \$26M for the Treatment Alternative.

The life cycle costs of operating and maintaining the diesel generators as primary power at the well sites is very high, and pushes the HAMP net present value to be essentially equivalent to that of the Treatment Alternative.

Attached is a draft letter and maps, for the Tribe's use, in seeking a quote from APS for a power extension to the HAMP well and booster sites. It is likely that a quote will not be available from APS for six months or more. The attached draft letter should have a tribal signatory, who will champion the process of obtaining the APS quote.

If the Tribe so desires, I can also provide a draft letter and maps for a quote request from the NTUA, but would need to know whether the Tribe would like to avoid the Tawa'ovi site, so as to keep the power line costs at a minimum, or if the Tribe would prefer to cross through Tawa'ovi, with Tawa'ovi providing a contribution to offset the corresponding higher power line costs.

Kerry and I are going to continue writing the PER, Strategic Plan, and the present value analysis report around the HAMP as the preferred alternative, acknowledging that grid power is likely to be endorsed by the Tribe, and understanding that in a worst-case-scenario, the HAMP with generator power is at least equivalent to the Treatment Alternative costs.

Preferably, we will receive clear direction from the Tribe in April, in regards to the power options described above.

Regards,

From: Kerry Brough [mailto:kbrough@cox.net]
Sent: Monday, March 31, 2014 8:51 AM

To: Hughes, Adam (IHS/PHX); Rea, Brad (IHS/PHX); Lorenz, Robert (IHS/PHX)

Cc: 'Frederick Tack'

Subject: HAMP PV Analysis

## Adam

Attached are the cost spreadsheets for the HAMP and arsenic treatment alternatives. These are now linked and generally reconciled with your capital cost numbers. The 'PV' worksheet shows the current present value comparison.

I have also included an updated draft of the PV report with additional text. This is still a rough draft. Note that I have not completed the cost tables or the description of facilities in this draft pending your direction on how you want to incorporate or connect information between the PV and the PER. The spreadsheet costs are those that will be incorporated into the report cost tables.

Please let me know how you would like to proceed. I will hold off any additional work on the PV report pending your direction.

What is your process for decision of the selected alternative? I will need that decision to begin update of the Strategic Plan.

## Regards

Kerry J Brough, PE OEM Services 10831 N 10th Place Phoenix, AZ 85020 602-818-7024 kbrough@cox.net

<sup>&</sup>quot;Operations and Asset Management for Water and Wastewater"